



Disease Detectives

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Communicable Disease Control UPDATE

MECKLENBURG COUNTY HEALTH DEPARTMENT
A Quarterly Publication

Reporting Animal Bites

According to the North Carolina General Statute 130A-196, a physician who attends a person bitten by an animal known to be a potential carrier of rabies shall report within 24 hours to the local health director the name, age, and sex of that person. Charlotte-Mecklenburg Police Department (Animal Care and Control Division) has been appointed by the local health director to investigate all animal bites occurring in Mecklenburg County. An animal bite is defined as follows: "Bite wound means any



penetration of the skin by an animal's teeth; scratches or abrasions which may have been in contact with animal's saliva or animal licks of mucosal surfaces or open wounds." All animal bites / animal scratches should be reported to Charlotte-Mecklenburg Animal Care and Control within 24 hours. Fax a completed "Animal Bite / Scratch Referral" form to Animal Care and Control at fax 704.336.5709. The reporting form is found on page 5 of this newsletter. Animal bite consultations are available by contacting Al Piercy, Epidemiology Specialist, at the Mecklenburg County Health Department at 704.336.6440 or Alford.Piercy@MecklenburgCountyNC.gov.

E. coli Outbreak at the State Fair

Twenty-five cases of shiga toxin-producing *Escherichia coli* were identified in persons who attended the North Carolina State Fair in Raleigh between October 13-23, 2011. The ill persons resided in eight North Carolina counties with Wake County having the largest number of ill persons (13). Eight persons were hospitalized and four had a life-threatening complication known as hemolytic uremic syndrome (HUS). Approximately one million visitors attended the fair last year.

A public health investigation determined that these infections were likely transmitted in the Kelley Building, a permanent structure where sheep, goats, and pigs are housed for livestock shows. Fair attendees were not intended to have physical contact with the animals in the Kelley Building;

however, 25% of the ill persons reported direct contact with animals in the implicated building. No other exhibits, foods or activities were linked to the outbreak.

A previous outbreak at the State Fair in 2004 resulted in passage of Aedin's Law in North Carolina. Aedin's Law created regulations for exhibitions housing animals intended for physical contact with the public. The Kelley Building was not subject to Aedin's Law. As a result, a multiagency task force has been created to identify additional interventions needed to prevent disease transmission in livestock exhibitions in North Carolina.

For more information, contact Jane Hoffman at 704.336.5490 or Jane.Hoffman@MecklenburgCountyNC.gov.

Did you know...

...that Health Alerts were sent to providers on 11/9/2011 and 12/21/2011 regarding PEP recommendations for military personnel at risk for rabies and information from the State Department of Health regarding Human Infections with a Novel Influenza Virus? For complete information and to sign up to receive Health Alerts go to [Healthcare Provider Alerts](http://HealthcareProviderAlerts) at the Health Department's website, www.meckhealth.org.

Bed Bug Insecticide Related Illnesses



The United States is experiencing an alarming resurgence of bed bugs (*Cimex lectularius*). Bed bugs are blood-sucking parasites

similar to head lice. The cause of the resurgence is not fully understood but thought to be related to the increased resistance of bed bugs to pesticides, increased domestic and international travel, lack of experience in prevention and control of bed bugs, and the decline of pest control programs in state and local health departments.

There has been an increase in pesticide related illnesses related to the use of insecticides. The Sentinel Event Notification System for Occupational Risks (SENSOR) was used to assess the frequency of illness from insecticides used to control bed bugs from 2003-2010. Cases were identified in seven states including North Carolina. A total of 111 illnesses were identified including one death. Pyrethroids, pyrethrins or both were implicated in 89% of the

illnesses. The most common risk factors were excessive insecticide applications, failure to wash or change pesticide-treated bedding, and lack of notification about the application of a pesticide.

The most frequently reported symptoms were neurologic (40%), respiratory (40%), and gastrointestinal (33%). The one fatality was an elderly, chronically ill woman in North Carolina. Her husband applied insecticide inside their home on two occasions. The chronically ill woman was found unresponsive two days after applying "Hot Shot Bed Bug and Flea Killer" to her arms, sores on her chest, and her hair.

The cost of multiple visits from a licensed pest control operator can be substantial. Controlling bed bugs requires an integrated approach which may include monitoring devices, removing clutter, application of heat or cold, vacuuming, sealing cracks, non-chemical pesticides, and effective chemical pesticides. Effective control typically

involves employing a licensed pest control professional. Persons who have a bed bug infestation should be encouraged to seek the services of a professional.

For more information, contact Jane Hoffman at 704.336.5490 or Jane.Hoffman@MecklenburgCountyNC.gov.

This periodical is written and distributed quarterly by the Communicable Disease Control Program of the Mecklenburg County Health Department for the purpose of updating the medical community in the activities of Communicable Disease Control. Program members include: Health Director—E. Wynn Mabry, MD; Medical Director—Stephen R. Keener, MD; Deputy Health Director—Bobby Cobb; Director, CD Control—Carmel Clements; Sr. Health Manager—Lorraine Houser; CD Control nurses—Freda Grant, Jane Hoffman, Penny Moore, Beth Quinn, Belinda Worsham; —Elizabeth Young (also Childcare nurse), Earlene Campbell-Coleman (also TB Outreach/Adult Day Health); Rabies/Zoonosis Control—Al Piercy; Health Supervisor—Carlos McCoy; DIS—Mary Ann Curtis, John Little, Michael Rogers, Jose' Pena; Preparedness Coordinator—Bobby Kennedy; Office Assistants—Pamela Blount, Vivian Brown, Janet Contreras.

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Vampire Bats—Are we at risk ?



There has been only one case of human rabies from a vampire bat reported in the

United States. In August, 2010 the CDC confirmed a fatal case of rabies in a migrant farm worker hospitalized in Louisiana with encephalitis. The patient developed acute

neurological symptoms shortly after arriving in the United States from Michoacán, Mexico. The patient was bitten by a bat in July in Mexico but never sought medical care. Although bats are the primary source of human rabies in United States, this is the first reported death from a vampire bat rabies virus variant in the United States. Although vampire bats are found only in Latin

America, research suggests the range of the vampire bat may be expanding. Public health officials should increase awareness of the risk for rabies after bat and other wildlife exposures. Clinicians caring for patients with acute progressive encephalitis should consider rabies in the differential diagnosis and implement early infection control measures.

Did you know...

...that Long Term Care facilities are now required to report all suspected communicable disease outbreaks to the local health department in which the facility is located? A new law, titled "An Act to Protect Adult Care Home Residents", was signed by Governor Perdue on May 31, 2011. One provision of the law includes guidelines for reporting suspected communicable disease outbreaks within adult care homes. To learn more go to www.ncdhs.gov.

Illness Exclusion Guidelines for Child Care



A child must be excluded from child care for the following:

- A Fahrenheit temperature of more than 100 degrees axillary or 101 degrees orally.
- Sudden onset of diarrhea characterized by an increased number of bowel movements compared to the child's normal pattern and with increased stool water, per child care center/family child care home policy, or has been diagnosed with a communicable enteric illness requiring exclusion (i.e. Salmonella, Shigella, etc.)***
- 2 or more episodes of vomiting within a 12 hour period.
- Red eye(s) with white or yellow discharge until 24 hours after treatment.
- Lice or ringworm (exclude at the

end of day, until treatment is started).

- Scabies (until treatment is completed).
- Chicken pox or a rash suggestive of chicken pox, regardless of immunization status.
- Tuberculosis, until a health care professional states the child is not infectious.
- Strep throat, until 24 hours after treatment has started.
- Pertussis, until 5 days after appropriate antibiotic treatment***
- Hepatitis A, until one week after onset of illness or jaundice***
- Impetigo, until 24 hours after treatment.
- A physician's, or other health professional's, written order that the child be separated from other children.
- Is unable to participate in age appropriate activities

The following diagnoses **do not** re-

quire exclusion from child care unless the child has fever, vomiting, diarrhea, or other illness exclusion criteria:

- Croup
- Hand, Foot, Mouth Disease
- RSV
- Fifth Disease
- Molluscum
- Roseola (once fever is resolved for minimum 24 hours)

For the complete document of NC Child Care Rules and Regulations please visit: [NC Child Care Rules](#).

For more information, contact Beth Young at 704.336.5076 or Elizabeth.Young@MecklenburgCountyNC.gov.

***Please consult with the Communicable Disease Control nurses at the Mecklenburg County Health Department (see page 7).

CDC—A Timeline



Throughout 2012 we will be taking a look back at 65 years of accomplishments by the CDC.

1946 — On July 1, the Communicable Disease Center was organized in Atlanta, Georgia.

1947 — In San Francisco, CDC took over the Public Health Service Plague Laboratory, acquiring an Epidemiology Division.

1948 — CDC gained worldwide recognition for the quality and quantity of its contributions to the taxonomy of the *Enterobacteriaceae*.

1949 — The United States was declared free of malaria as a significant public health problem.

1950 — Fifteen CDC staffers conducted the first investigation of an epidemic of polio in Paulding County, Ohio.

1951 — The Epidemic Intelligence Service (EIS) was established to help protect against biological warfare and manmade epidemics.

1952 — U.S. Surgeon General, Dr. Leonard A. Scheele, reported that

the Communicable Disease Center was ready to combat possible biological warfare.

1953 — CDC reported the first case of rabies in a bat.

1954 — Alexander D. Langmuir, MD, MPH, set up a leptospirosis laboratory in Jacksonville, Florida.

1955 — CDC established the Polio Surveillance Program.

1956 — Dr. William Cherry found the first practical use for the fluorescent technique and used it to research communicable diseases of bacterial origin.

Next: 1957 to 1977

Did you know...

...that cell phones helped public health researchers track the cholera epidemic in Haiti? About one-third of the population in Haiti had cell phones during the earthquake of 2010. The phone owners remained anonymous. A cell phone provider tracked the location of callers using the SIM cards inside the cell phones. The cell phone records revealed 600,000 people fled Port-au-Prince within the first three weeks after the earthquake. The cell phone records also revealed most who fled the city left the countryside within a short period of time (due to a lack of food). Months later the public health researchers used the same cell phone tracking system to predict where the cholera cases would appear in the next few weeks. The cell phones were also used to send health messages about handwashing, oral hydration and breast feeding during the cholera outbreak.

Campylobacter Infections and Raw Milk Club Members



On July 7, 2011, Mecklenburg County Communicable Disease Control Program

was notified of one confirmed case of Campylobacter, and four suspect cases in a family in Huntersville, NC. When interviewed, the mother of the ill family stated she felt certain that the family's illness was attributed to the consumption of raw milk since all family members who drank the milk became ill while those that did not remained symptom free. The most severely ill child was seen by a doctor who ordered a stool culture based on the symptoms of bloody diarrhea, abdominal pain, nausea, vomiting and fever.

The NC Division of Public Health was immediately notified. On the same day, another confirmed case in an adult from Huntersville, was reported. This person was hospitalized with Campylobacter sepsis. During the interview, it was determined this patient had consumed a large amount of raw milk from the same lot as the first confirmed case. Another family member of the second case consumed a smaller amount of raw milk and had mild symptoms

which resolved on its own.

The affected families reported the raw milk was obtained from a dairy in York, South Carolina. NC DPH Epidemiologist for Foodborne Outbreak Investigations learned of another case in Iredell County who also drank raw milk from the same lot bringing the total to 3 confirmed and 4 suspect cases. FDA Milk Specialty Units in South Carolina and Atlanta were notified and took the lead in investigating the legal aspects of interstate commerce of raw milk; South Carolina permits raw milk consumption and North Carolina does not permit the sale of raw milk.

On July 5, 2011, the dairy farm had undergone a routine environmental inspection by SC Department of Health and Environmental Control (SC DHEC) and no violations were noted, however Campylobacter testing is not part of routine inspection. South Carolina has had no reported cases of Campylobacter tied to this dairy. Milk samples from the dairy and from the family in Iredell county were tested by SC DHEC. All samples tested negative. A representative from SC DHEC Bureau of Laboratories stated "It is important to remember that a negative milk sample for

Campylobacter does not necessarily mean that Campylobacter was not present. It is very difficult to test milk for Campylobacter and Campylobacter is an expected pathogen of raw milk, which is one reason why pasteurization is recommended". Pasteurization is the process of heating milk and milk products to a high enough temperature for enough time to kill illness-causing bacteria. Many studies have shown that pasteurization does not significantly change the nutritional value of milk.

A wide variety of microorganisms that are sometimes found in raw milk include: bacteria (e.g., *Brucella*, *Campylobacter*, *Listeria*, *Mycobacterium bovis*, a cause of tuberculosis in cattle which can also cause TB in humans, *Salmonella*, Shiga toxin-producing *Escherichia coli*, *Shigella*, *Yersinia*), parasites (e.g., *Giardia*), and viruses (e.g., norovirus).

Before deciding to use raw milk, please refer to the CDC's "Food Safety and Raw Milk" [website](#).

For more information, contact Belinda Worsham 704.336.5498 or Belinda.Worsham@MecklenburgCountyNC.gov.

Herpes Zoster Vaccine Update



Herpes Zoster Vaccine (Zostavax) was licensed and recommended in

2006 for the prevention of herpes zoster among adults aged 60 years and older. In March 2011, the Food and Drug Administration (FDA) ap-

proved the use of Zostavax in adults aged 50 through 59 years. In June 2011, the Advisory Committee on Immunization Practices (ACIP) declined to recommend the vaccine for adults aged 50-59 years. The ACIP reaffirmed its existing recommendation that vaccine be routinely given to adults aged 60 years and older. Supply issues have resulted in periodic

shortfalls of this vaccine since 2007. Planned improvements by Merck and the addition of new manufacturing facilities are expected to increase the supply of vaccine within a few years.

For more information contact Jane Hoffman at 704.336.5490 or Jane.Hoffman@MecklenburgCountyNC.gov.

Did you know...

...that premastication (i.e., chewing foods or medicines before feeding to a child) was reported recently as a route of HIV transmission through blood in saliva? Other diseases associated with premastication of food include hepatitis B virus, *Streptococcus mutans*, group A streptococcus, *Helicobacter pylori*, human herpesvirus, and Epstein Barr virus. Healthcare providers should educate their patients regarding the risks of premastication and discourage the practice among their HIV+ patients.

Animal Bite/Scratch Referral

CHARLOTTE/MECKLENBURG ANIMAL CARE AND CONTROL ANIMAL BITE/SCRATCH REFERRAL

According to the North Carolina General Statute 130A-196, "A physician who attends a person bitten by an animal known to be a potential carrier of rabies shall report within 24 hours to the local health director the name, age, and sex of that person."

The Charlotte Mecklenburg Police Department – Animal Care and Control Division has been appointed by the local health director to investigate all animal bites occurring in Mecklenburg County. An animal bite is defined as follows: "Bite Wound means any penetration of the skin by an animal's teeth; scratches or abrasions which may have been in contact with animal's saliva or animal licks of mucosal surfaces or open wounds."

Your health care provider has contacted the Charlotte Mecklenburg Animal Care and Control Division and reported your involvement in an animal bite.

1. Are you a resident of Mecklenburg County? Y N
2. What is your full name? _____
3. What is your date of birth? _____
4. What is your home address? _____
5. What is your telephone number? _____
6. Did the animal bite occur in Mecklenburg County? Y N
7. If the bite did not occur in Mecklenburg County, where did it occur?
 City _____ County _____ State _____
8. Description of the biter animal: DOG CAT OTHER _____
 BREED _____ COLOR _____ GENDER _____
9. Name of animal owner _____
10. Address of animal owner _____
11. Phone number of animal owner _____
12. Is the animal owner aware of the bite? YES NO
13. What part of the body were you bitten? Please be specific i.e. left side, right side

14. Briefly describe what events occurred surrounding the animal bite

HEALTH CARE PROVIDER MUST FAX THIS FORM TO THE CHARLOTTE MECKLENBURG ANIMAL CARE AND CONTROL DIVISION AT (704) 336-5709 WITHIN 24 HOURS OF BEING REPORTED

North Carolina Department of Health and Human Services
Division of Public Health • Epidemiology Section
Communicable Disease Branch • Immunization Branch (WCH Section)



ATTENTION PHYSICIANS/HOSPITALS:
Mail/fax this form to your local health department.

Mecklenburg County Health Department
700 North Tryon St., Ste. 214
Charlotte, NC 28202

Sexually Transmitted Diseases, HIV & AIDS
(Call) 704.432.1742 or (Fax) 704.336.6200

All Other Reportable Communicable Diseases
(Call) 704.336.2817 or (Fax) 704.353.1202

Confidential Communicable Disease Report—Part 1

NC DISEASE CODE
(see reverse side for code)

DATE OF SYMPTOM ONSET

Patient's First Name		Middle	Last	Suffix	Maiden/Other	Alias
Birthdate (mm/dd/yyyy)		Sex <input type="checkbox"/> M <input type="checkbox"/> F <input type="checkbox"/> Trans.		Parent or Guardian (of minors)		Patient Identifier SSN
Patient's Street Address			City	State	ZIP	County Phone () - -
Age	Age Type <input type="checkbox"/> Years <input type="checkbox"/> Months <input type="checkbox"/> Weeks <input type="checkbox"/> Days	Race (check all that apply): <input type="checkbox"/> White <input type="checkbox"/> Black/African American <input type="checkbox"/> American Indian/Alaska Native <input type="checkbox"/> Native Hawaiian or Pacific Islander		Ethnic Origin <input type="checkbox"/> Asian <input type="checkbox"/> Other <input type="checkbox"/> Hispanic <input type="checkbox"/> Non-Hispanic		Initial Source of Report to Public Health: <input type="checkbox"/> Health Care Provider (specify): <input type="checkbox"/> Hospital <input type="checkbox"/> Private clinic/practice <input type="checkbox"/> Health Department <input type="checkbox"/> Correctional facility <input type="checkbox"/> Laboratory <input type="checkbox"/> Other Name: _____ Contact Person/Title: _____ Phone: () - - Fax: () - - Date Local Health Department Notified: _____
Was patient hospitalized for this disease? (>24 hours) <input type="checkbox"/> Yes <input type="checkbox"/> No		Did patient die from this disease? <input type="checkbox"/> Yes <input type="checkbox"/> No		Is the patient pregnant? <input type="checkbox"/> Yes <input type="checkbox"/> No		Where was disease/condition most likely acquired? <input type="checkbox"/> In patient's county of residence <input type="checkbox"/> Outside county, but within NC - County: _____ <input type="checkbox"/> Out of state - State/Territory: _____ <input type="checkbox"/> Out of USA - Country: _____ <input type="checkbox"/> Unknown
Patient is associated with (check all that apply): <input type="checkbox"/> Child Care (child, household contact, or worker in child care) <input type="checkbox"/> School (student or worker) <input type="checkbox"/> College/University (student or worker) <input type="checkbox"/> Food Service (food worker) <input type="checkbox"/> Health Care (health care worker) <input type="checkbox"/> Correctional Facility (inmate or worker) <input type="checkbox"/> Long Term Care Facility (resident or worker) <input type="checkbox"/> Military (active military, dependent, or recent retiree) <input type="checkbox"/> Travel (outside continental United States in last 30 days)						
Local Health Department Use Only Was this disease part of a recognized outbreak? <input type="checkbox"/> Yes <input type="checkbox"/> No Outbreak setting: <input type="checkbox"/> Restaurant/Retail (name): _____ <input type="checkbox"/> Household (index case): _____ <input type="checkbox"/> Child Care (name): _____ <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Community (index case): _____				Local Health Department Use Only Communicable Disease Nurse or Designee Reporting to DPH: Name: _____ Phone: () - - Date sent to DPH: _____ Local Health Director's Signature or Stamp Approving Report		

CLINICAL INFORMATION

Specify patient symptoms and treatment:

For sexually transmitted diseases only—if patient was treated, specify medication, dosage, & duration:

DIAGNOSTIC TESTING

LABORATORY TESTING:

Collection Date	Result Date	Type of Test	Specimen Source	Results (include serogroup/type)	Reference Range	Lab Name—City/State
<h1 style="margin: 0;">Attach Lab Report</h1>						

Reporting Communicable Diseases – Mecklenburg County

To request N.C. Communicable Disease Report Forms, telephone 704.336.2817

Mark all correspondence "CONFIDENTIAL"

Tuberculosis:

TB Clinic	704.432.2490
Mecklenburg County Health Department	FAX 704.432.2493
2845 Beatties Ford Road	
Charlotte, NC 28216	

Sexually Transmitted Diseases, HIV, & AIDS:

HIV/STD Surveillance	704.432.1742
Mecklenburg County Health Department	FAX 704.336.6200
700 N. Tryon Street, Suite 214	
Charlotte, NC 28202	

All Other Reportable Communicable Diseases including Viral Hepatitis A, B & C:

Report to any of the following nurses:

Freda Grant, RN	704.336.6436
Jane Hoffman, RN,	704.336.5490
Elizabeth Quinn, RN	704.336.5398
Belinda Worsham, RN	704.336.5498
Penny Moore, RN	704.353.1270
Earlene Campbell-Coleman, RN	704.432.1975
Communicable Disease Control	FAX 704.353.1202
Mecklenburg County Health Department	
700 N. Tryon Street, Suite 271	
Charlotte, NC 28202	

Animal Bite Consultation / Zoonoses / Rabies Prevention:

Al Piercy, RS	704.336.6440
Communicable Disease Control	FAX 704.432.6708
Mecklenburg County Health Department	
618 N. College St.	
Charlotte, NC 28202	
or State Veterinarian	919.707.5900
State after hours	919.733.3419

Child Care Nurse Consultant:

Elizabeth Young, RN	704.336.5076
Communicable Disease Control	FAX 704.353.1202
Mecklenburg County Health Department	
700 N. Tryon Street, Suite 271	
Charlotte, NC 28202	

Suspected Food borne Outbreaks / Restaurant, Lodging, Pool and Institutional Sanitation:

Food & Facilities Sanitation	(Mon-Fri)	704.336.5100
Mecklenburg County Health Department	(evenings; Sat/Sun)	704.432.1054
700 N. Tryon Street, Suite 208	(pager evenings; Sat/Sun)	704.580.0666
Charlotte, NC 28202	FAX	704.336.5306

Mecklenburg County Health Department